RUDMAN, M.D., Inzh.

Conference of welders of the Kuybyshev Province. Svar. proizv. no.9:45 S '65. (MIRA 18:9)

1. Predsedatel' sektsii svarki Kuybyshevskogo pravleniya Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti.

L 9884-66 EWT(1)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/HM
ACC NR: AP5027609 SOURCE CODE: UR/0135/65/000/011/0044/0045

AUTHOR: Rudman, M. D.; Ivashin, A. S. 44,55 44,55 40 B

ORG: Kuybyshev Aviation Institute (Kuybyshevskiy aviatsionnyy institut) 44,55

TITLE: DTS-2 meter for simultaneous measurement of the duration and magnitude of the current in spot welding 14,44,55

SOURCE: Svarochnoye porizvodstvo, no. 11, 1965, 44-45

TOPIC TAGS: welding, metal welding, spot welding, welding current, current meter, /DTS 2 meter

ABSTRACT: The design and operation of a DTS-2 meter 48 10 for simultaneous measurement of the current magnitude and pulse duration in spot welding are described. The meter, Patent No. 43158 with priority from 10 February 1964, is designed to operate on a-c spot welders and measures currents up to 50,000 amp with an accuracy of ± 5% and pulse durations from 0.06 to 1.0 sec with an accuracy of ± 2%. In multipulse welding, the meter is used together with an oscillograph. Orig. art. has: 1 figure. [MS]

SUB CODE: 13,14/ SUBM DATE: none/ ATD PRESS: 4165

Card 1/1 UDC: 621.791.037

(N) L 10938-66 EWT(d)/EWT(l)/EWT(m)/EEC(k)-2/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)
ACC NR: AP6002529 EWP(l)/EWA(h)/EWA(c) JD/HM SOURCE CODE: UR/0286/65/000/023/0035/0035

INVENTOR: Rudman, M. D.; Rumanov, B. A.

ORG: none

TITLE: Electric power meter. 25 Class 21, No. 176643 [announced by Kuybyshev Aviation Institute (Kuybyshevskiy aviatsionnyy institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 35

TOPIC TAGS: welding, metal welding, resistance welding, spot welding, electric, power meter

ABSTRACT: This Author Certificate introduces a device for measuring electric power input at the electrodes in resistance spot welding. The device consists of a current sensor, a voltage sensor, a computing element, and an integrator. It incorporates a two-loop servosystem, with the computing element, essentially a linear rotary transformer, electrically connected with the servosystem and the voltage sensor. [MS]

SUB CODE: 13, 09/ SUBM DATE: 27Jul64/ ATD PRESS: 4172

Card 1/1

UDC: 621.791.763
621.317.385.002.54

81495

SOV/137-59-5-10276

18.7200

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 116 (USSR)

AUTHOR: Rudman, M.D.

TITLE: Investigations Into the Current Field in Spot Welded Parts, Carried out on Flat Models

PERIODICAL: Tr. Kuybyshevsk. aviats. in-t, 1958, Nr 7, pp 159 - 167

ABSTRACT: The configuration of current fields in thin plates during spot resistance welding was investigated with an "EGDA-6/51" electric integrator, using models made of electroconductive paper. It was established that the configuration of a current field is only determined by the d_o/δ_o ratio (where d_o is the diameter of the current feed contact, and δ_o is the thickness of the plate or the width of the model). The effects of the finite dimensions of the plate or the length of the model are insignificant. Simulation results can be used for fields with d_o/δ_o 2.25. The magnitude of the error in determining the I_y/I_o ratio (where I_y and I_o are the current passing through a round cylinder with an axis congruent with the electrodes axes, and the diameter d_o,

Card 1/2

AUTHOR: Rudman, M.D., Engineer

TITLE: Chronicles of NTO Mashprom (Khronika NTO Mashproma) The Welding Section of the Kuybyshev NTO (Sektsiya svarki metallov Kuybyshevskogo NTO)

117-2-27/29

PERIODICAL: Mashinostroitel', 1958, # 2, p 45-46 (USSR)

ABSTRACT: This is a brief general review of work done by the Welding Section of the Kuybyshev Oblast' NTO. Welding sections have been created at different plants. About 50 delegates from plants and institutes of Kuybyshev and its oblast' participated in a conference on welding. Engineer I.M. Ilyukhin made a report - "Arc Welding of Thin Parts in Carbon Dioxide" and told of his plant's experience. Engineer V.I. Stolbov reported on his plant's experience in welding the new aluminum-manganese alloy "AMr-6T" Engineers B.V. Romanenko and N.I. Yevdokimov reported on successfully welding the alloy BT-1Д

The conference decided to request the Kuybyshev Sovnarkhoz to find a possibility for centralized production of electrode and roller blanks from materials "MK" and "MЦ-4" at one of the plants.

AVAILABLE: Library of Congress

Card 1/1

BUDMAN, M.S.

Fourth Regional Conference of Kuybyshev Province welders.
Svar. proiz. no.9:42 S '64. (MIRA 17:12)

1. Predsedatel' sektsii svarki Kuybyshevskogo oblastnogo pravleniya Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy mashinopromyshlennosti.

S/125/61/000/003/007/016
A161/A133

AUTHOR: Rudman, M.D.

TITLE: Investigation of the electric resistance in projection welding on models

PERIODICAL: Avtomaticheskaya svarka, no. 3, 1961, 48 - 51

TEXT: The article presents data on electric current distribution field studied on flat conductive paper models simulating joints between halves of ball bearing separators being joined by projection welding. An electric ЭИ-12 (EI-12) integrator was used for the quantitative evaluation of the accuracy of the method. Reference is made to a previous work in which it had been proven that flat paper models are suitable for qualitative studies of current distribution in parts being joined by spot or projection welding (Ref. 1: M.D. Rudman, Issledovaniye polya toka v detalyakh, svarivayemykh tochechnoy svarkoy, na ploskikh modelyakh. Trudy KUAI, vyp. VII, 1958) and to a work in which the current distribution had been determined in a plate with two electric contacts applied on one axis with the aid of an ЭГДА-6/51 (EGDA-6/51) integrator [Ref. 2: P.F. Fil'chakov, V.I. Pan'chishin, Integratory ЭГДА-6/51 i ЭГДА-6/53. Instruktsiya po ekspluatatsii (EGDA-6/51 and EGDA-6/53 integrators. Operating instructions), K., 1955]. The EI-12

Card 1/2

Investigation of the electric resistance in....

electric integrators are designed for the investigation of physical phenomena that can be described by differential equations of ellyptical type:

$$\frac{\partial}{\partial x}\left[A_1(x, y)\frac{\partial z}{\partial x}\right] + \frac{\partial}{\partial y}\left[A_2(x, y)\frac{\partial z}{\partial y}\right] = F(x, y)$$

where $A_1(x,y)$, $A_2(x,y)$ are positive coordinate functions, and $F(x, y)$ any (including alternating) function. It is shown that the resistance ratio of two cones made from the same material and having an equal base and different height is equal to the height ratics. Two photographs show the current distribution determined with paper models of two joined ball bearing separator halves. The investigation was complemented by current distribution determination on three-dimensional metal models. The resistance of the metal model portion with projection was equal to 62.3% of the total resistance of the entire model when the model was solid, or 65% when the model had a cavity. In paper models with a cavity, the corresponding resistance value on a projection with a cavity was 69%. Thus the data were sufficiently close. Engineer V.P. Veselov is mentioned having prepared programs for the electric integrator. There are 2 figures and 4 Soviet-bloc references.

ASSOCIATION: Kuybyshevskiy aviatsionnyy institut (Kuybyshev Aviation Institute)
SUBMITTED: June 10, 1960

Card 2/2

27036
S/125/61/000/004/011/013
A161/A127

AUTHOR: Rudman, M. D.

TITLE: Results of stand test of no. 407 ball bearings with welded ball cages

PERIODICAL: Avtomaticheskaya svarka, no. 4, 83 - 85, 1961

TEXT: Several batches of no. 407 ball bearings with welded ball cages have been subjected to long-time tests on a test stand at a bearing plant to decide if it would be practical to replace the riveted ball cages by welded ones. The test ball cages had been welded on a МРИПШ-600 (MRIPSh-600) welder using three different process variations with different heat separation intensity, as had been described previously [Ref. 1: M. D. Rudman, "Avtom. svarka", no. 2, 1960]. The ball cages were pickled in a sulfuric acid solution, rinsed in a soap solution and dried by air blast prior to tests. The maximum value of the welding current pulses in every joint and its duration were determined by oscillograms. The tests consisted in running with 5,000 rpm under 819 kg radial load, with spindle oil as a lubricant. The results are given in a graph and a table. The best results were obtained in the 3rd process variation: welding current amplitude 6,030 amp, contact pressure 950 kg, 9th stage of the welding transformer, welding pulse duration of 0.25 sec.

Card 1/2

25(1) SOV/125-60-2-7/21

AUTHOR: Rudman, M.D.

TITLE: The Formation of the Weld Joint in the Projection Welding of Ball Bearing Separators

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 2, pp 67-71 (USSR)

ABSTRACT: Projection welding of bearing separators has been studied since 1954 at the Kuybyshev Aviation Institute. Preparations are now being made at a bearing plant to start projection welding of separators of "Nr 407" ball bearings. The projections on the separator halves are formed in the process of making these halves in multispindle presses. The projections which are made on one separator half only, eliminate the necessity of punching holes for rivets, and thus simplify production and cut costs. The welding process is carried out in special welding dies (Figure 1) under 850 kg of pressure. The process is described in detail. The com-

Card 1/2

SOV/125-60-2-7/21

The Formation of the Weld Joint in the Projection Welding of Ball Bearing Separators

bination of stamping separator halves with the formation of projections results in high quality reliability and strength, and ensures a much longer life of the bearings than required by the "GOST" standard. There are 2 diagrams, 1 oscillogram, 3 photographs, and 1 Soviet reference.

ASSOCIATION: Kuybyshevskiy aviatsionnyy zavod (Kuybyshev Aviation Plant).

SUBMITTED: August 3, 1959.

Card 2/2

RUDMAN, M.D., inzh.

Conference of Kuybyshev Province welders. Svar. proizv. no.8:47 Ag '63. (MIRA 17:1)

1. Predsedatel' sektsii svarki metallov Kuybyshevskogo oblastnogo pravleniya Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti.

25(1) SOV/125-12-4-11/18

AUTHOR: Rudman, M.D., Engineer

TITLE: The Use of a Resistance Indicator for Measuring the Compression Stress of the Components during Spot Electric Welding

PERIODICAL: Avtomaticheskaya svarka,1959, Vol 12, Nr 4, pp 87-88 (USSR)

ABSTRACT: The author shows a way to measure the compression stress of the componets during the welding process. Wire resistance indicators are used, they are glued together with the electric handle of the welding machine. Good results were obtained by using indicators made of constantan-wire with a diameter of 0.02-0.03 mm and a basis of 10-25 mm, with a resistance of about 120 ohm. To supply the measuring bridge and the amplification of the scheme's concordance signal, the portable wire electrode tensometer TsNIITMASh can be used. There is an oscillogram on compression stress

Card 1/2

The Use of a Resistance Indicator for Measuring the Compression Stress of the Components With Spot Electric Welding

and welding current, obtained by welding on a condenser-machine type ZAWK-900.

ASSOCIATION: Kuybyshevskiy aviatsionnyy institut (Kuybyshev Aviation Institute)

SUBMITTED: June 11, 1958

RUDMAN, M.D.

"Voltage drop on Welded Pile as a Criterion of Spot Welding Quality"

report presented at the 13th Scientific Technical Conference of the Kuybyshev Aviation Institute, March 1959.

RUDMAN, M.D.

Investigation on models of electric resistance in projection welding. Avtom.svar. 14 no.3:48-51 Mr '61. (MIRA 14:2)

1. Kuybyshevskiy aviatsionnyy institut.
(Electric welding—Electromechanical analogies)

25431 S/137/61/000/006/054/092
A006/A101

12300

AUTHOR: Rudman, M.D.

TITLE: Voltage drop on a pile to be welded, as a parameter for the checking and control of projection and spot welding processes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1961, 3, abstract 6E22 ("Tr. Kuybyshevsk. aviats. in-t", 1960, no. 10, 155 - 161)

TEXT: During projection welding of ball bearing separators the necessity arose of checking the welding conditions for each welded joint. It is suggested to check the projection and spot welding processes by the voltage drop on the pile to be welded, with automatic correction of the welding pulse according to results from measurements. For the welding of high-quality parts (such as ball bearings) a 2-pulse welding cycle is recommended; the voltage drop on the welded pile is registered during the first pulse and welding is performed during the second pulse under corrected conditions. The use of the suggested welding cycle yields a considerable economical effect on account of improved quality of welding, elimination of rejects, and the full preservation of the most-expensive bearing

Card 1/2

Voltage drop on a pile to be welded , ...

25431 S/137/61/000/005/054/092
A006/A101

parts, i.e. rings and bodies of revolution. When mechanizing the supply of bearings to the operational space of the welding machine, such a cycle makes it possible to design units which assure welding with automatic correction of the optimum conditions.

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

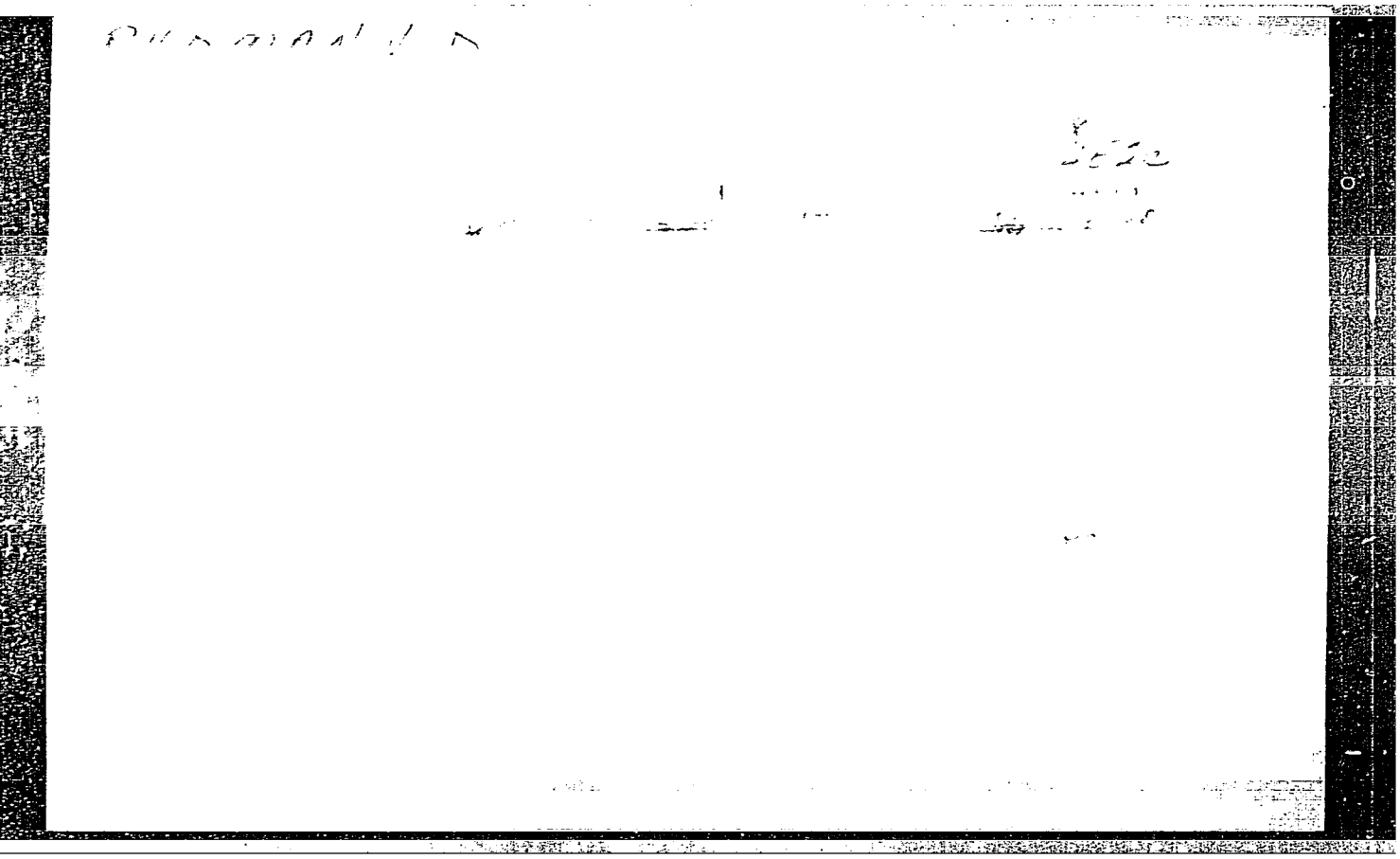
1. RUDMAN, V.

2. USSR (600)

4. Mongolian Literature-History and Criticism

7. "Under the sun of a free Mongolia." Review by V. Rudman. Sib. ogni. No. 6 - 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.



RUDMAN, V.M., inzh.

Automated bubble cap installation. Stek. i ker. 22 no.1:10-12 Ja '65. (MIRA 18:7)

1. Opytno-konstruktorskoye byuro energotekhnologicheskikh protsessov khimicheskoy promyshlennosti (OKB ETKhIM).

KAZANTSEV, I.G.; KAPUSTIN, Ye.A.; RUDMAN, V.D.

Determining the coefficient of mass transfer between the gaseous phase and the bath of an open-hearth furnace. Izv. vys. ucheb. zav.; chern. met. 8 no.11:44-47 '65. (MIRA 18:11)

1. Zhdanovskiy metallurgicheskiy institut.

GLINKOV, G.M.; KALOSHIN, N.A.; KAPUSTIN, Ye.A.; KARPOV, G.D.; RUDMAN, V.D.; KHIISH, L.I.

Results of modeling open-hearth furnaces fired by cold high-calorie gas and hot mixed gas. Izv. vys. ucheb. zav.; chern. met. no.2: 138-147 '61. (MIRA 14:11)

1. Zhdanovskiy metallurgicheskiy institut.
(Open-hearth furnaces--Models)
(Gas flow--Models)

SOV / 137-58-7-14139

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 24 (USSR)

AUTHORS: Kaloshin, N. A., Rudman, V. D.

TITLE: High-pressure and High-temperature Fans (Ventilyatory vysokogo davleniya i vysokikh temperatur)

PERIODICAL: Sb. nauch. tr. Zhdanovsk. metallurg. in-ta, 1957, Nr 4, pp 97-100

ABSTRACT: Descriptions are provided of fans (F) built and tested at the Metallurgical-furnaces Laboratory of the Zhdanov Metallurgical Institute. The high-pressure F create a head of 1150 mm water, have rotors (R) of 800 mm diameter with 16 blades curving rearward, and deliver 10,000 m^3/hr. The R operates at 2840 rpm, and the motor develops 30 kw. The R of high-temperature F are made of special Cr-Ni steel; the shaft and bearing housing are water-cooled. The R having a 400-mm diameter has 12 blades and operates at 3000 rpm; the F, with 110 mm head of water, delivers 800 m^3/hr. The motor has 1.5 kw power. The F were tested for 10 hours of continuous operation with air heated to from 100 to 980°C in coil-type electrical heaters. In order to obtain a complete picture of service

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High-pressure and High-temperature Fans

strength, cold R were subjected to a flow of hot air, and hot R to a flow of cold air. The F were tested for operation with air, CO_2, and steam. In 5 months of operations, the R showed no damage of any kind, the surface of the metal remaining smooth and bright.

G. G.

1. Blowers--Design 2. Blowers--Materials 3. Furnaces--Equipment

KAPUSTIN, Ye.A.; KALOSHIN, N.A.; RUDMAN, V.D.; LEPORSKIY, V.V.

Self-carburetion of natural gas with the use of oxygen. Stal' 23 no.5:420-421 My '63. (MIRA 16:5)

1. Zhdanovskiy metallurgicheskiy institut i Azovskiy staleplavil'nyy zavod im. Sergo Ordzhonikidze v Zhdanove.
(Gas, Natural)

RUDMITSKIY, A.A.; KHOTINSKAYA, A.N.; DUPLIK, K.S.

System palladium-rhodium-silver. Zhur. neorg. khim. 6 no.7:1622-1635 Jl '61. (MIRA 14:7)
(Palladium) (Rhodium) (Silver)

H/011/62/000/002/001/001
D229/D304

AUTHORS: Rudnai, Guidó, Doctor, Professor and Koncz, Károly, Research Assistant

TITLE: Explosive forming of sheets, a new technique

PERIODICAL: Gép, 14 no. 2, 1962, 41-46

TEXT: This is a brief description of the use of explosive forming methods in metallurgy, based almost exclusively on Western works. The main advantages of the process are said to be (1) Accuracy and consistency; (2) potentially high surface quality; (3) production of complex shapes in a single operation, and (4) shaping of new alloys unsuitable for fabrication by conventional methods. The following variations are described: (1) the Dynapac process, (2) closed explosion chamber with no punch, and (3) no explosion chamber and no punch. These are described and illustrated, suggesting their fields of applicability. Equations are given for calculating the pressure obtained with an explosive charge and the critical pressure of deformation, together with a short discussion

Card 1/2

of the explosives. Construction of the dies and plant design are mentioned in brief. There are 8 figures and 13 references: 1 Soviet-bloc and 12 non-Soviet-bloc. The 4 most recent references to the English-language publications are: J.N. Cook, Sheet Metal Ind., 37, 1960, no. 396, 253-258; Anon., Aircraft Production, March 1961, v. 23, no. 3, 80-86; Anon., Aircraft Production, April 1961, v. 23, no. 4, 122-123; W.S. Hollis, Machinery (Engl.), 1961, (98) no. 2561, 267-269.

ASSOCIATION: Budapesti Müszaki Egyetem Repülögépek Tanszék Szerkezeti és Gyártási Csoport (Technical University, Budapest, Institute of Aeronautics, Construction and Production Group)

RUDNAI, Guido, egyetemi tanar

Light constructions. Jarmu mezo gep 6 no.1:14-21 '59.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RUDNAI, Guido, dr.

Experiments in sheet deformation by the blasting method.
Gepgyartastechn 3 no.6:220-224 Je'63.

1. Budapesti Muszaki Egyetem.

RUDNAI, O.; BARSY, G.

The results of Salk vaccination in Hungary as measured on the 1959 poliomyelitis epidemic. Acta microb. hung. 8 no.1:103-113 '61.

1. State Institute of Hygiene, Budapest.
(POLIOMYELITIS immunol.)

LOSONCZY, Gyorgy, dr.; VIGH, Gyula, dr.; RUDNAI, Otto, dr.; BODA, Domonkos, dr.

Correlation between Salk vaccination and natural history of poliomyelitis. Orv. hetil. 102 no.16:733-766 16 Ap '61.

1. Budapesti Laszlo korhaz es az Orszagos Kozegeszsegugyi Intezet.

(POLIOMYELITIS immunol)

RUDNAI, G.

Some problems of the light structure of means of transportation.
Periodica polytechn eng 4 no.4:423-438 '60. (EEAI 10:6)

1. Gruppe fur strukturelle und technologische Gestaltung des Lehrstuhls fur Flugzeugbau der Technischen Universitat, Budapest.
(Airplanes)

RUDNAI, G., Dr.,Prof.,C.Sc.

Recording the load-spectra of vehicles. Acta techn Hung 35/36:497-505 '61

1. Technical University, Budapest.

RUDNAI, Guido

Periodical article reviews of the Aircraft Division. Jarmu mezo gep 6 no.8:247 '59.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RUDNAI, Guido, dr., egyetemi tanar

Fatigue limit behavior of machine constructions. Jarmu.mezo. gep. 10 no.9:321-340 S'63

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RUDNAI, Guido, dr., egyetemi tanar

Aviation engineering. Jarmu mezo gep 8 no.1:13-14 Ja '61.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RUDNAI, G., prof., Dr. techn.

On some problems of the political economy of socialism; an attempt at applying mathematics in the theoretical national economy studies. Periodica polytechn electr 4 no.3:227-246 '60. (EEAI 10:5)
(Economics)

TERPLAN, Sandor, egyetemi docens; RUDNAI, Guido, dr., egyetemi tanar, tanszekvezeto

On the reform curriculum of the Section of Motor Vehicle Engineers, Faculty of Mechanical Engineering, Budapest University of Technical Sciences. Jarmu mezo gep 10 no.3:115-116 Mr '63.

1. Budapesti Muszaki Egyetem Gepeszmernoki Kar, Gazgepek es Automobilok Tanszek (for Terplan). 2. Budapesti Muszaki Egyetem Gepeszmernoki Kar, Vasuti Geptan Tanszek; "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja (for Rudnai).

RUDNAI, G., prof.,dr.

Standpoint on the "Remarks" by Dr. J. Devics and K. Foldes published "Periodica Polytechnica - Electrical Engineering", vol.5, no.4, 1961, p.395-403. Periodica polytechn electr 6 no.3:231-233 '62.

RUDNAI, Guido; MICHELBERGER, Pal

Improving machinability of austenite chromium-nickel steels. Muszaki kozl MTA 31 no.1/4:165-169 '62.

1. Budapesti Muszaki Egyetem Repulogepek Tanszeke Szerkezeti es Gyartasi Csoportja.

RUDNAI, Guido, dr.; BENCZE, Jozsef; PETROCZY, Gyorgy

Statistical measuring instrument for recording histograms. Meres automat 12 no.8:250-256 '64.

1. Chair of Railroad Machines, Budapest Technical University.

RUDNAI, Guido, dr.

Spaceship constructions. Jarmu mezo gep 11 no.8:315 Ag '64.

1. Editorial board member, "Jarmuvek-Mezogazdasagi Gepek".

RUDNAI, GY.

2

Struct

87. **Slab construction for one storey buildings at the Csepel housing project.** Gy Rudnai, Gy Sebestyén. *Magyar Epitoipar* Vol 5, 1956 No 3, pp 115–126. 13 figs

The construction of the housing project for the workers of the Csepel Works at *Csepel* has been started. The one-storey detached houses are being built without basements. In order to speed up construction and to reduce costs full scale prefabrication has been adopted. Foundations consist of concrete piles driven to depths [illegible] 2 m. Prefabricated soffit beams resting on these piles support the load of the wall structure and contribute at the same time to the appearance of the building. Three types of buildings differing in living space only, have been designed to a two-way horizontal module of 0.8 m. Full-height load bearing wall slabs have been cast from a mix consisting of fly ash, hydrated lime, granulated blast furnace slag and gypsum. The density of the hardened panel material is 1200 to 1300 kg/cu m at a 28 day cube strength of 90 kg/sq cm. Panels are designed to suit all three types of buildings. Windows and doors have been installed [illegible] the erection of the panels. The total [illegible] panels required for each house is 24, which [illegible] different types. Interior finishes, plastering and other finishing tradeswork have been carried out by conventional methods. The roofing consists of precast prestressed trusses. Unit construction costs per sq m living space are the same as those of brick buildings built to standard plans, overall costs however are lower.

RUDNAI, [illegible].

Repulogepek gyartasa es javitasa. Budapest, Tankonyvkiado, 1954. 606 p. (Egyetemi tankonyv) (The manufacture and repair of airplanes; a university textbook. Illus., bibl., diagrs., footnotes, form, graphs, tables)

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

RUDNAI, GY.

Application of Soviet experiences with the work of the Institute of Architecture. p. 91. Vol. 4, No. 3, 1955. MAGYAR EPITOIPAR. Budapest, Hungary.

SOURCE: East European List, (EEAL) Library of Congress Vol. 6, No. 1 January 1956.

RUDNAI, D'yula [Rudnai, Gyula]; MASLOBOYSHCHIKOVA, V.M.[translator]; BUZHEVICH, G.A.,kand. tekhn. nauk, red.; NIKOLAYEVA, N.M., red.

[Lightweight concrete] Legkii beton. Moskva, Stroiizdat, 1964. 239 p. (MIRA 17:6)

RUDNAI, GY

82. Materials for prefabricated dwelling houses — Gy. Rudnai. (*Magyar Epitőipar* — Vol. 3, 1954, No. 12, pp. 511–524, 20 figs., 3 tabs.)

HT

Three new lightweight building materials have been developed at the Institute for Building Science, (a) gas silicate, (b) pulverized coal ash—foam silicate, (c) pulverized coal ash—microporite. Gas silicate is a lightweight material with closed pores the diameters of which do not exceed 2 mm. Aggregates are ground and unground pit sand, ground calcined lime is used for binding, and aluminium powder as a gasifier. After mixing, expanding and solidification, the material in the moulds is steam treated at 8 atm, and thereafter ready for immediate use. Owing to the pozzuolanic properties of pulverized coal ash — a waste material of power stations — it is utilized in the manufacture of pulverized coal ash—foam silicate and pulverized coal ash—microporite. A frothing agent is added to the former whereas the small pores of the latter are obtained by the addition of larger amounts of water. Their advantages: utilization of the hitherto completely wasted pulverized coal ash, light weight, and good heat insulating properties.

	Gas silicate	Pulverized coal ash	
		microporite	foam silicate
Volume weight, kg/m³	700–800	675–1085	930
Strength, kg/cm²	45–50	90–110	25
Heat transfer coeff (referred to laboratory air-dry materials)	0.21	0.18–0.23	0.18

RUDNAI, J.; MAYER, I.; ROMAN, A.

Tasks for the preparatory committee of construction in the building industry. p. 108. Vol. 4, No. 3, 1955. MAGYAR EPITOIPAR. Budapest, Hungary.

SOURCE: East European List, (EEAL) Library of Congress Vol. 6, No. 1 January 1956.

EXCERPTA MEDICA Sec 8 Vol 12/8 Neurology Aug 59

3793. THE 1957 POLIOMYELITIS EPIDEMIC IN HUNGARY. I. AN EPIDEMIOLOGICAL STUDY - Rudnai O. State Inst. of Hyg., Budapest - ACTA MICROBIOL. ACAD. SCI. HUNG. 1958, 5/4 (359-368) Graphs 4 Tables 5 Illus. 2

A poliomyelitis epidemic involving 2,334 cases (23.8 per 100,000) is described. The epidemic was more extensive in the country (26.2 per 100,000) than in Budapest (13.6 per 100,000). The northeastern part of the country suffered most. County Hajdu-Bihar had the highest attack rate (88.2 per 100,000). The case incidence, which at the beginning of the year had already been relatively high, began to rise rapidly during May and attained its maximum in July. The rapid rise of the curve was followed by a sudden fall. The age-specific attack rate was highest (284 per 100,000) in the group of the one- to 2-year-old children. The attack rate was 194

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per 100,000 for the infants and 73 per 100,000 for the 3-6-year age group. The proportions of the 3-6- and 7-14-year age groups have increased since 1956. The general case-fatality rate was 6.1%. The age-specific case-fatality rate for infants exceeded 9%, and decreased with increase of age until 14 yr. The group above 15 yr. displayed the highest case-fatality rate. (L, 7, 8)

1497. THE PART PLAYED BY AGE IN SOME INFECTIOUS DISEASES - Az életkor szerepe néhány fertőző betegségben - Barsy G. and Rudnai O. Országos Közegészségügyi Intézet, Budapest - EGÉSZSÉGTUDOMÁNY 1957, 1/3 (129-141) Graphs 12 Tables 3

The age-specific morbidity was calculated for measles, whooping cough, diphtheria, scarlet fever and poliomyelitis for 1931-38 and 1949-54. The morbidity rate was found to have shifted toward the younger age groups in all the diseases examined. For each of the 5 diseases the age was determined at which morbidity reached the maximum. The shift of the maximum incidence toward the younger age groups not only manifested itself in the mean values for each of the 2 periods studied, but was consistently revealed in the years following World War II. It was most marked in whooping cough and poliomyelitis. In the former condition, morbidity shows the absolute maximum in the first year of life, so that it is advisable to start vaccination in early infancy. Studying the relationship of age and the movement of epidemic cycles, the curves for the individual age groups were found to be changing in all 5 diseases in almost the same proportion throughout the cycles. This appears to be in contradiction to the generally accepted theory of cyclic variation in diseases of the respiratory tract.

Véghelyi - Budapest (L, 7, 17)

1380. THE 1957 POLIOMYELITIS EPIDEMIC - Az 1957 évi poliomyelitis járvány - Rudnai O. NEPEGÉSZSÉGÜGY 1958, 39/5-6 (121-127) Graphs 8 Tables 9 Illus. 1

Hungary experienced the largest poliomyelitis epidemic in recorded history in 1957. There were 2,334 notified cases, 23.8 per 100,000 of population. This was twice as large as any previously recorded figure. 143 died, the mortality being 6.1% of cases and 1.5 per 100,000 of population. The peak incidence of the infections occurred during the summer and early autumn months. The epidemic was particularly severe in the northeastern counties, where a morbidity rate of up to 88.2 per 100,000 was encountered. 61% of all cases occurred in children under 2 yr. of age. The mortality was highest - 10.4% among 125 over 15 yr. of age, followed by 9.3% among 333 under 1 yr of age. Of those nursed at home 19.1% of 63 died and of those treated in hospital 5.8% of 2,271 died.

Lorber - Sheffield (L, 7, 8, 17)

1101. THE 1957 POLIOMYELITIS EPIDEMIC - Az 1957. évi poliomyelitis járvány - Rudnai O. Közl. az Országos Közegészségügyi Int. Járványügyi Osztályáról - NEPEGESZSEGÜGY 1958, 39/5-6 (121-127) Graphs 8 Tables 9 Illus. 1

Hungary experienced the largest poliomyelitis epidemic in recorded history in 1957. There were 2,334 notified cases, 23.8 per 100,000 of population. This was twice as large as any previously recorded figure. 143 died, the mortality being 6.1% of cases and 1.5 per 100,000 of population, The peak incidence of the infections occurred during the summer and early autumn months. The epidemic was particularly severe in the north-eastern counties, where morbidity rate of up to 88.2 per 100,000 was encountered. 61% of all cases occurred in children under 2 years of age. The mortality was highest - 10.4% among 125 over 15 years of age, followed by 9.3% among 333 under 1 year of age. Of those nursed at home 19.1% of 63 died and of those treated in hospital 5.8% of 2,271 died.

Lorber - Sheffield (L, 7, 8, 17)

KUDMAI, S.

The 1957 poliomyelitis epidemic in Hungary. I. An epidemiological study. p. 359.

ACTA MICROBIOLOGICA. (Magyar Tudomanyos Akademia) Budapest, Hungary, Vol. 5, no. 4, 1958. In English.

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

EXCERPTA MEDICA Sec 7 Vol 13/10 Pediatrics Oct 59

2799. THE 1957 POLIOMYELITIS EPIDEMIC IN HUNGARY. I. AN EPIDEMIOLOGICAL STUDY - Rudnai O. State Inst. of Hyg., Budapest - ACTA MICROBIOL. ACAD. SCI. HUNG. 1958, 5/4 (359-368) Graphs 4 Tables 5 Illus. 2

A poliomyelitis epidemic involving 2,334 cases (23.8 per 100,000) is described. The epidemic was more extensive in the country (26.2 per 100,000) than in Budapest (13.6 per 100,000). The northeastern part of the country suffered most. County Hajdu-Bihar had the highest attack rate (88.2 per 100,000). The case incidence, which at the beginning of the year had already been relatively high, began to rise rapidly during May and attained its maximum in July. The rapid rise of the curve was followed by a sudden fall. The age-specific attack rate was the highest (284 per 100,000) in the group of the 1- to 2-year-old children. The attack rate was 194 per 100,000 for the infants and 73 per 100,000 for the 3- to 6-year age group. The proportions of the 3-6- and 7-14-year age groups have increased since 1956. The general case fatality rate was 6.1%. The age-specific case fatality rate for infants exceeded 9%, and decreased with increase of age until 14 yr. of age. The group above 15 yr. displayed the highest case fatality rate. (L, 7, 8)

RUDNAI, Otto (Gyali ut 2-6, Budapest IX.)

The 1959 poliomyelitis epidemic in Hungary. Acta microbiol Hung 7 no.4:433-444 '60. (EEAI 10:5)

1. State Institute of Hygiene, Budapest.
(HUNGARY--POLIOMYELITIS)

KUBINYI, L.; RUDNAI, O.; BARSY, G.

An epidemiological analysis of tetanus vaccination in Hungary.
Acta microbiol. Hung. 9 no.2:133-143 '62.

1. State Institute of Hygiene, Budapest (Director: T. Bakacs).
(TETANUS) (VACCINATION)

RUDNAI, Otto, dr.

The 1959 epidemic of poliomyelitis. Nepegeszsegugy 41 no.12:348-352 D '60.

1. Kozlemeny az Orszagos Kozegeszsegugyi Intezet (foigazgato: Bakacs Tibor dr.) jarvanyugyi osztalyarol.
(POLIOMYELITIS epidemiol)

RUDNAI, Otto, dr.; BARSY, Gyula, dr.

Results of the inoculation with Salk's vaccine on the picture of poliomyelitis in 1959. Nepegeszsegugy 41 no.12:353-357 D '60.

1. Kozlemeny az Orszagos Kozegeszsegugyi Intezet (foigazgato: Bakecs Tibor dr.) forvanyugyi es statisztikai osztalyarol.
(POLIOMYELITIS immunol)
(VACCINATION statist)

RUDNAI, O.

The 1959 poliomyelitis epidemic in Hungary. Acta microb.hung. 7 no.4:433-444 '60.

1. State Institute of Hygiene, Budapest.
(POLIOMYELITIS epidemiol)

RUDNAI, Otto, dr.

Epidemic of Borrhalm disease in Hungary in 1958. I. Epidemiological characteristics. Orv.hetil. 101 no.37: 1303-1306 11 S '60.

1. Orszagos Kozegeszsegugyi Intezet, Jarvanyugyi Osztaly.
(PLEURODYNIA, EPIDEMIC epidemiol.)

RUDNAI, Otto, dr.,; MIHALYFI, Iren, dr.,; BARSY, Gyula, dr.

Studies on dyspepsia coli in day nurseries. Orv. hetil. 97 no.3: 67-70 15 Jan 56.

1. Az Orszagos Kozegeszsegugyi Intezet (foigazgato: Tako Jozsef dr.) Jarvanyugyi- (osztalyvezeto: Petrilla Aladar dr.) es Bakteriologigiai Osztalynak (osztalyvezeto: Furesz Istvan dr.) kozlemenye.

(INTESTINES, bacteriol.
E. coli in feces of healthy child., incidence (Hun))
(DIARRHEA, bacteriol.
same)
(ESCHERICHIA COLI
incidence in feces of healthy child.(Hun))

[illegible] A. and RUDNAI O. Az 1946-47. evi febris recurrens jarvany. The febris recurrens epidemic in the year 1946-47. Nepegeszsegugy, Budapest 1949, 30/185-215) Tables 2

This epidemic, coming over a Hungary from Rumaina, actually started in 1945 and lasted until the middle of 1947. The greater number of the cases occurred in the Eastern counties and the disease affected in more than 50% of cases in persons between 10 and 29 years of age. The average mortality amounted to 3.7%. 80-85% of the cases occurred in the gipsy settlements.

Went - Debrecen

SO: Medical Microbiology & Hygiene Section IV, Vol. 3, No. 7-12

RUDNAI, Otto, dr.; SZANTO, Rozsa, dr.; KRISTOF, Laszlo, dr.

Dysentery epidemics in winter. Nepegeszsegugy 36 no.10: 330-334 Oct 55.

1. Az Orsagos kozgeszsegugyi Intezet (foigazgato: Tako, Jozsef dr. es a mosonmagyarovari v arosi tanacs vb. egeszegugy osztalya. (Osztalyvezeto: Kristof, Laszlo dr.) kozlemenye.

(DYSENTERY, epidemiol.
winter epidemics in Hungary, etiol. & control. (Hun))

BARSY, G.; RUDNAI, O.

The influence of age in some infectious diseases. Acta microb. hung. 5 no.1:59-73 1958.

1. State Institute of Hygiene, Budapest.
(COMMUNICABLE DISEASES, statist.
age-specific morbidity)
(AGING
age-specific morbidity in communicable dis., statist.)

KUBINYI, Laszlo, dr.; RUDNAI, Otto, dr.; BARSY, Gyula, dr.

Epidemiological evaluation of anti-tetanus vaccination. Orv. hetil. 103 no.17:769-774 29 Ap '62.

1. Orszagos Kozegeszsegugyi Intezet.

(TETANUS immunol) (VACCINATION statist)

RUDNAI, Otto, dr.; SZANTO, Rozsa, dr.; KRISTOF, Laszlo, dr.

Dysentery epidemics in winter. Nepegeszsegugy 36 no.10: 330-334 Oct 55.

1. Az Orsagos kozgeszsegugyi Intezet (foigazgato: Tako, Jozsef dr. es a mosonmagyarovari v arosi tanacs vb. egeszegugy osztalya. (Osztalyvezeto: Kristof, Laszlo dr.) kozlemenye.

(DYSENTERY, epidemiol.
winter epidemics in Hungary, etiol. & control. (Hun))

RUDNAI, Otto, dr.,; MIHALYFI, Iren, dr.

Studies on dysentery in public nurseries. Orv. hetil. 96 no.47: 1303-1304 20 Nov 55

1. Az Orszagos Kozegeszegugyi Intezet (foigazgato: Tako Jozsef dr.) Jarvanyugyi- (osztalyvezeto: Petrilla Aladar dr.) es Bakteriologiai Osztalyanak (osztalyveaeto: Puresz Istvan dr.) kozl.

(DYSENTERY, BACILLARY
in infant and child, in nurseries)

KNEFFEL,Pal, dr.,; RUDNAI, Otto, dr.

Mass food poisoning caused by Salmonella anatum and Salmonella saint paul. Orv. hetil. 96 no.44:1213-1215 30 Oct 55.

1. Vas megye Kozegeszsegugyi Jarvanyugyi Allomasanak (igaz: Kneffel Pal dr.) es az Orsz. Kozegeszsegugyi Intezet (foigazgato: Tako Jozsef dr.) Jarvanyugyi Osztalyanak (osztalyvezeto: Petrilla Aladar dr.) kozl.
(FOOD POISONING, bacteriolog,
Salmonella anatum & S. saint paul)

RUDNAL, G.

The theory of light constructions. In German. p. 309.

PERIODICA POLYTECHNIKA. ENGINEERING. (Budapest Muszaki Egyetem.)
Budapest, Hungary. Vol. 2, no. 4, 1958.

Monthly list of East European Accessions. (EEAI) LC, vol. 8, no. 2, July 1959.

Uncl.

RUDNAYA, A.I.

Influence of electromechanical inertia of a mirror galvanometer on the result of determination of time-lag constants in thermometers. Zhur. tekh. fiz. 28 no.3:674-678 Mr '58. (MIRA 11:4)

1. Sverdlovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta metrologii.
(Thermometry) (Galvanometer)

AUTHOR: Rudnaya, A. I. 57-28-3-32/33

TITLE: The Influence of the Electromechanical Inertia of a Mirror Galvanometer Upon the Result of the Determination of the Time-Lag Constant of Thermometers (Vliyaniye elektromekhanicheskoy inertsii zerkal'nogo gal'vanometra na rezul'tat opredeleniya postoyannoy otstavaniya termometrov)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 3, pp. 674-678 (USSR)

ABSTRACT: The investigation of the thermal inertia of radiation-pyrometers showed that in some cases the parameters of the galvanometer and its performance can influence the nature of the test cooling-curve of the thermoreceiver (the part of the thermometer immediately participating in the heat exchange). An analytical evaluation of the magnitude and the nature of the modification of this error is given here. It is shown that in the semilogarithmic diagram $\ln \frac{\varphi}{\varphi_0} = f(\tau)$ for the cooling of the thermoreceiver deviations from the linearity-bends and breaks- caused by the influence

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The Influence of the Electromechanical Inertia of a Mirror Galvanometer Upon the Result of the Determination of the Time-Lag Constant of Thermometers

57-28-3-32/33

of the inertia of the movable system of the mirror galvanometer-can be ovserved. It is pointed out that in the determination of the time-lag constant of thermoreceivers with low inertia the influence of the inertia of the mirror galvanometer upon the experimental cooling curve must be taken into account. The recordings of the galvanometer must be taken into account beginning from the moment which is determined from equation (7) or must be determined from formula (3), m denoting the cooling velocity, a quantity which is connected with the time-lag constant ϵ ; $m = \frac{1}{\epsilon}$, φ denotes the deflection angle of the movable part of the device. τ - denotes time. There are 4 figures and 2 references, all of which are Soviet.

ASSOCIATION: Sverdlovskiy filial VNIIM (Sverdlovsk Branch of VNIIM)

SUBMITTED: September 16, 1955

Card 2/2

1. Galvanometers--Performance 2. Thermometers--Performance
3. Radiation pyrometers--Errors

ACC NR: AT6034606 (N) SOURCE CODE: UR/3232/66/000/003/0099/0104

AUTHOR: Gayvoronskiy, Ya. S.; Rudnaya, A. I.; Romanyuk, N. A.; Silkina, T. S.

ORG: none

TITLE: A study of silicon photodiodes as the sensitive elements in pyrometers

SOURCE: L'vov. Politekhnicheskiy institut. Kontrol'no-izmeritel'naya tekhnika, no. 3, 1966, 99-104

TOPIC TAGS: silicon diode, photodiode, radiation pyrometer, radiation sensitivity, temperature sensitive element

ABSTRACT: Pyrometers directly measuring a variable proportional to the change in parameters of the radiation receiver are widely used to solve problems in monitoring temperature regimes. Lead sulfide photoresistors, semiconductor photocells, and germanium and silicon photodiodes are used as the radiation receivers in these pyrometers. Silicon and germanium photodiodes are advantageously distinguished by their small size, simplicity, and high sensitivity. Especially promising are silicon photodiodes which can operate in ambient temperatures of 80° to +150°C and are insensitive to radiation energy at frequencies in the range of spectral absorption of water vapor and carbon dioxide gas. Because of the use of photodiodes in temperature sensors it became necessary to study the parameters and characteristics of photodiodes with respect to stability of photocurrent, spectral sensitivity, and photocurrent dependence on load resistance at various ambient temperatures. This paper studies

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silicon photodiodes of different designs and manufacturing technique in order to determine their use in radiation pyrometry. The results obtained indicate that silicon photodiodes made by the diffusion technique are most suitable for use in pyrometers directly measuring a signal because they are of good stability. The temperature error of diffusion photodiodes, which is greater than that of those made by the alloy technique, may be reduced by using proper light filters. The authors operate with the fundamental relationship defining short-circuit photodiode photocurrent as a function of the radiation energy of a black body at a certain temperature:

$$I_T = K \int_{\lambda_0}^{\lambda_1} b^0_{\lambda T} \gamma_\lambda d\lambda, \qquad (1)$$

where I_T is photocurrent at black body temperature T; K is a constant depending on instrument design, and the other notation is standard. Orig. art. has: 3 formulas and 5 figures.

SUB CODE: 09/ SUBM DATE: none/ ORG REF: 003/ OTH REF: 001

VENEDIKTOV, M.V., red.; PECHUK, V.I., red.; NECHAYEV, G.K., kand. tekhn. nauk, red.; RUDNYY, N.M., red.; RUDNAYA, A.I., kand. tekhn. nauk, red.; KUDRYAVTSEVA, R.G., otv. za vyp.; PAVLENKO, V.N., red.; BUREYEV, A.L., tekhn. red.

[Industrial control, equipment and the means of automatic control] Pribory promyshlennogo kontrolia i sredstva avtomatiki; doklady i soobshcheniia. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1963. 370 p. (MIRA 16:12)

1. Nauchno-tekhnicheskaya konferentsiya po priboram promyshlennogo kontrolya i sredstvam avtomatiki. 2. Institut avtomatiki Gosplana Ukr.SSR (for Nechayev).
(Automatic control)

RUDNAYA, A.I., kand.tekhn.nauk; FEDONYUK, I.I.

Suction-type pyrometer for measuring gas temperatures up to 1700°. Avtom.i prib. no.1:70-71 Ja-Mr '62. (MIRA 15:3)

1. Institut avtomatiki Gosplana USSR.
(Pyrometers)

RUDNAYA, A.I.

Checking of radiation pyrometers in the range of 100° to 900°C.
Trudy VNIIM no.35:80-83 (95), 1958. (MIRA 14:9)
(Pyrometers--Testing)

RUDNAYA, A.I.; BOSTREM, Z.D.

Radiation method for measuring the temperature of metal surfaces in the range of 100° to 900° C. Trudy VNIIM no.35:95-107 (95), 1958. (MIRA 14:9)

(Pyrometry)

GAYVORONSKIY, Ya.S.; PUDNAYA, A.I.

Measuring the temperature of the tuyere zone in a blast furnace. Met. i gornorud. prom. no.6:5-7 N-D '65.
(MIRA 18:12)

GORDOV, A.N.; RUDNAYA, A.I.

High-speed graduation of radiation pyrometers. Izm.tekh.no.1:68-70 Ja-F '57. (MLRA 10:4)
(Pyrometers)

RUDNAYA, A.I.; SURIKOVA, Ye.Ye.; CHILIKINA, N.D.

Seminar on servicing and repairing flowmeters. Izm.tekh.no.1:83-84 Ja-F '57. (MLRA 10:4)
(Flowmeters)

RUDNAYA, A. I.

RUDNAYA, A. I.- "Investigation of the Radiation Method of Measuring Surface Temperatures in the Range 200-700°C." Commission on Standards, Measures, and Measuring Instruments at the Council of Misisters USSR, All-Union Sci Res Inst of Metrology imeni D. I. Mendeleyev, Leningrad, 1955 (Dissertations For Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

SOV/81-59-15-53248

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 140 (USSR)

AUTHOR: Rudnaya, A.I.

TITLE: Radiation Pyrometer for Measuring the Temperature of Surfaces in the Interval of 100 - 900°C

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35 (95), pp 108-117 (USSR)

ABSTRACT: A radiation pyrometer (RPZ-3) has been designed and investigated for measurements of surface temperatures of oxidized steel products in the interval of 100 - 900°C. The calculation of the geometric parameters of the device and detailed indications to its manufacture are given. It is recommended to use chromel-copel thermocouples for the heat receiver. The arising thermo-emf (0.8 - 14.5 mv) can be measured both by a potentiometer and a needle millivoltmeter.

A. Vorob'yev

Card 1/1

SOV/81-59-15-53248

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A. Vorob'yev

Card 1/1

SOV/58-59-8-18969

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 272 (USSR)

AUTHOR: Rudnaya, A.I.

TITLE: Checking Radiation Pyrometers in the 100° - 900°C Range

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35 (95), pp 80-83

ABSTRACT: Two types of radiators were prepared and investigated: a cavity immersed in a uniformly heated tank containing a molten mixture of $NaNO_3$ and KNO_3 salts, and a cavity in the form of an electric furnace. A thermocouple was used to check the uniformity of heating of the walls (at 900°C an optical pyrometer was used). The range of operating temperatures amounted to 300° - 600°C for the immersion radiator and 100° - 900°C for the radiator in the form of a tubular furnace; the accuracy of reproducing the temperatures was equal to $\pm$ 1.7° and $\pm$ 1.3°C respectively. The radiator in the form of a tubular furnace, which possesses a number of advantages, was used to calibrate the pyrometers. The methods of calibration are described. Calibration errors are discussed.

A.G. Sviridov

Card 1/1

RUDNAYA, A.I., inzh.; GAYDUCHENKO, N.I., inzh.; ROMANYUK, N.A., inzh.

Measuring the temperature of magnesium alloys during the melting in induction furnaces. Mashinostroenie no. 2:48-50 Mr-Ap '64. (MIRA 17:5)

SOV/58-59-8-18973

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 272 (USSR)

AUTHORS: Rudnaya, A.I., Bostrem, Z.D.

TITLE: The Radiation Method of Measuring the Temperature of Metallic Surfaces In the 100° - 900°C Range

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35 (95), pp 95-107

ABSTRACT: The authors studied the total radiation coefficient (TRC) of the surface of some steels and non-ferrous metals. The measurements were carried out on an apparatus consisting of an electric furnace, a thermocouple and a "RPZ-3" radiation pyrometer (abstract 18974). The uniform heating of the samples was ensured. Measurements were made of the TRC of surfaces burnished, polished or oxidized at a certain temperature. The TRC was determined along the perpendicular to the surface. The resultant curves of the TRC versus the temperature show that the character of the increase in the TRC with a rise in temperature is distinctive for each individual case. Thus, for example, in the case of the burnished surface of steel 50, the TRC varies from 0.4 at 350°C to 0.84 at 500°C, and with a further rise in temperature up to 900°C, it stays between 0.8 and

Card 1/2

The Radiation Method of Measuring the Temperature of Metallic Surfaces in the 100° - 900°C Range

0.9. Some curves have maxima. In all cases the temperature rose at a rate of 100 deg/hr. The variation of the TRC as a function of heating time at various temperatures is basically a function of the "saturation curve" type. The emergence, in time, of a special type of stabilization in the TRC of low-alloy carbon steels establishes the single-valued dependence of the TRC upon the temperature.

Ye. Antropov

SOV/58-59-8-18974

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 273 (USSR)

AUTHOR: Rudnaya, A.I.

TITLE: A Radiation Pyrometer for Measuring Surface Temperatures in the 100° - 900°C Range

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35 (95), pp 108-117

ABSTRACT: The author describes the highly sensitive rapid-action "RPZ-3" pyrometer, which is used in measuring the temperature of oxidized surfaces of steel objects. An elementary geometrical analysis, supplemented with energy considerations, indicates that the most efficient dimensions for the pyrometer's eyepiece are as follows: length 200 mm; diameter of the diaphragm apertures, no greater than 30 mm. Diameter of the receiving plate of the thermocouple, 1.5 mm. The right choice of materials is essential, and the material for the eyepiece glass is especially important. Calculations have shown that gilt glass possesses the most stable coefficient of reflection, but for purposes of mass production steel glass is quite satisfactory. A chromel-coppel thermocouple proved to be the most suitable. The experiment showed that it is

A Radiation Pyrometer for Measuring Surface Temperatures in the 100° - 900°C Range

reasonable to use 5 thermocouples with electrodes having a diameter of 0.03 or 8 thermocouples with electrodes having a diameter of 0.08. For the described parameters of the apparatus the thermo-emf was sufficient to be measured with a millivoltmeter at 10 - 15 mV. The thermal inertia of the eyepiece was studied. Depending upon the thermocouple utilized, it took from 3 to 10 sec to attain 98% of the established magnitude. The pyrometer's building specifications and a calibration table are provided.

Ye. Antropov

RUDNAYA, A.I.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleyeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No.2 (Scientific Research Abstracts; Collection of Articles, Nr 2) Moscow, Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR, Komitet standartov, mer i izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measurement and control. The reports were prepared by scientists of institutes of the Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR (Commission on Standards, Measures, and Measuring Instruments under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleyeva (All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleyev) in Leningrad; Sverdlovsk branch of this institute; VNIIK - Vsesoyuznyy nauchno-issledovatel'skiy institut Komiteta standartov, mer i izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments) created from MGIMIP - Moskovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Moscow State Institute of Measures and Measuring Instruments) October 1, 1955; VNIIFTRI - Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific Research Institute of Physicotechnical and Radio-engineering Measurements) in Moscow; KhGIMIP - Kharkovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Khar'kov State Institute of Measures and Measuring Instruments); and NGIMIP - Novosibirskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Novosibirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

Formula for a Platinum Resistance Thermometer in the Interval -183 - 0°C 72

Aliyeva, F.Z., B.N. Olemik, and N.Z. Dolgiy (Deceased) (VNIIM). Producing and Studying the Triple Point of Water 73

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RUDNAYA, A.I., kand.tekhn.nauk; GAYDUCHENKO, N.I.; BUTUSOV, I.V.

Pickup for measuring temperatures in mixing devices. Avtom.i prib. no.3:83 Jl-S '62. (MIRA 16:2)

1. Institut avtomatiki Gosplana UkrSSR.
(Thermocouples)

RYBAKOV, Ivan Mikhaylovich; RUDNEV, A.P., red.

[Providing for safe working conditions in industry] Obespechenie bezopasnykh uslovii truda na proizvodstve. Moskva, Izd-vo "Metallurgiia," 1964. 39 p. (MIRA 17:7)

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S/844/62/000/000/091/129
D204/D307

AUTHORS: Slovokhotova, N. A., Koritskiy, A. T., Buben, N. Ya., Bibikov, V. V. and Rudnaya, G. V.

TITLE: The action of fast electrons on polyethylene at low temperatures

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 531-535

TEXT: The aim of this work was to determine whether the double bonds found in irradiated polyethylene (PE) form directly during irradiation, or whether they arise from secondary radical interactions. Low- and high-pressure PE was irradiated with 1.6 Mev electrons, in liquid or gaseous N_2, and the specimens were examined by ir spectroscopy. Trans-vinylene-type bonds formed when high-pressure PE was irradiated with a dose of 206 Mrad (966 cm^{-1} band), both at -196 and +50°C, with similar energy yields, showing that

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such double bonds form by direct interaction of PE with the electrons. In liquid N_2 irradiation of the same PE with 200 Mrad also increased the proportion of vinyl-type bonds (909 cm^{-1} band), by a factor of 6 in relation to unirradiated PE. The proportion of vinyl bonds in low-pressure PE decreased for doses up to 25 Mrad, and then increased; the development of unsaturation was less pronounced at higher temperatures, Such bonds are both formed (directly) and destroyed in irradiated PE. The destructive process predominates at higher temperatures owing partly to the increased mobility of polymeric chains, but it is also connected with energy transfer processes during irradiation. Both types of PE exhibited a 985 cm^{-1} band when irradiated with doses of 300 Mrad, in liquid N_2, and after warming up to 26, 50 and 120°C over a period of 5 minutes. This band indicates the appearance of conjugated double bonds. The 944 cm^{-1} band, corresponding to allyl radicals, was also observed. This band was only stable below -100°C in high pressure PE and disappeared rapidly on warming to 50°C; in low-pressure PE

the same band was stable up to 100°C. This difference is explained by the higher crystallinity of low-pressure PE. Additions of benzene or toluene considerably reduced the intensity of this band, owing to the participation of additive molecules in energy transfer processes; the same lowering effect was observed with respect to the conjugated double bonds. There are 4 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR; Fiziko-khimicheskiy institut im. L. Ya. Karpova (Institute of Chemical Physics, AS USSR; Physico-Chemical Institute im. L. Ya. Karpov)

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L 1881-66 EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b) IJP(c) JD/JG/HW/RM

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AUTHOR: Blagonravova, A. A.; Pronina, I. A.; Uvarov, A. V.; Rudnaya, G. V.; Aref'yeva, S. M.

TITLE: Infrared spectroscopic study of the effect of metals on the reaction of formation of polyurethanes. Report No. 2.

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 4, 1965, 1-4

TOPIC TAGS: sodium compound, cobalt compound, polyurethane, IR spectroscopy

ABSTRACT: The reaction forming urethanes in the presence of sodium acetate and cobalt naphthenate catalysts was studied by means of IR spectroscopy, which makes it possible to follow the reaction between the isocyanate and the hydroxy ester and to establish the presence of side reactions. The starting reagents were 2,4-toluyelene diisocyanate and di-β-hydroxyethyl adipate. The IR spectroscopic method revealed a difference in the catalytic effect of salts of alkali metals and metals of variable valence: in addition to the main reaction forming urethanes, side reactions occur in the presence of alkali metals (sodium acetate). It was found that as the concentration of the sodium salts decreases, the rate of the

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